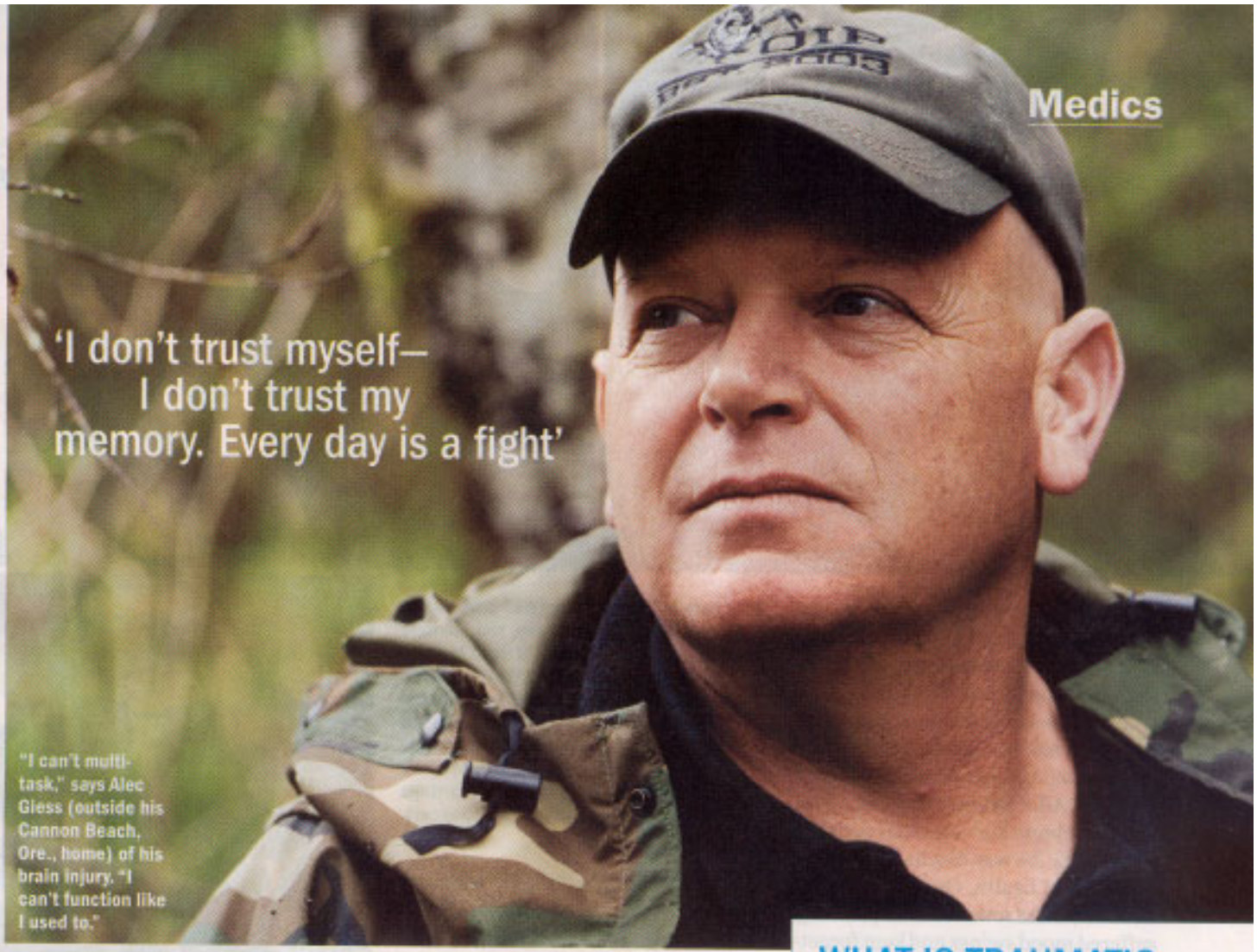


"I can't multi-task," says Alec Giess (outside his Cannon Beach, Ore., home) of his brain injury. "I can't function like I used to."

After Iraq, Devastating New Wounds

High-tech body armor is saving soldiers' lives on the battlefield. But it's leaving them with brain damage

Alec Giess is struggling to describe what it's like to do battle with his own mind. To get through the day, the 45-year-old Iraq war vet refers to the several typed notes stuck to the doors of his Cannon Beach, Ore., home, which remind him to get rest, plan his days and refer regularly to the closest thing he has to a functioning memory—his date book. Then, as if on cue, Giess's description of his ailment is interrupted by a smoke alarm. He leaps off his living room couch and runs into a smoke-filled kitchen. "Oh, my word!" he cries, realizing that in intending to boil water for tea he ignited a burner under a now scorched empty pan. "This is my life now," Giess says wearily. "As soon as the buzzing quits, I'll be better."

The smoke alarm eventually stops, but the buzzing in Giess's head has not let up since the Army Reserve officer was seriously wounded in Iraq on Dec. 16, 2003. A combat engineer with the

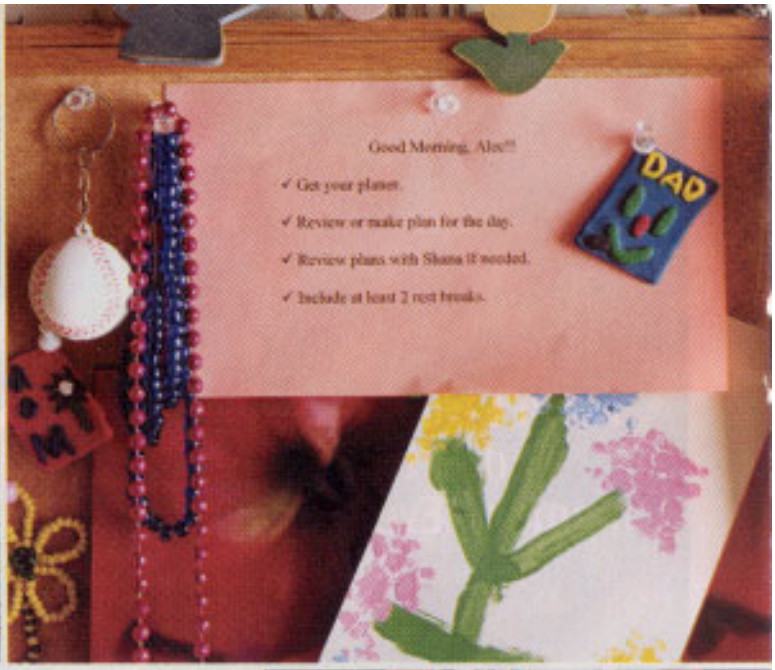
Photographs by DEBRA McCLINTON

WHAT IS TRAUMATIC BRAIN INJURY?

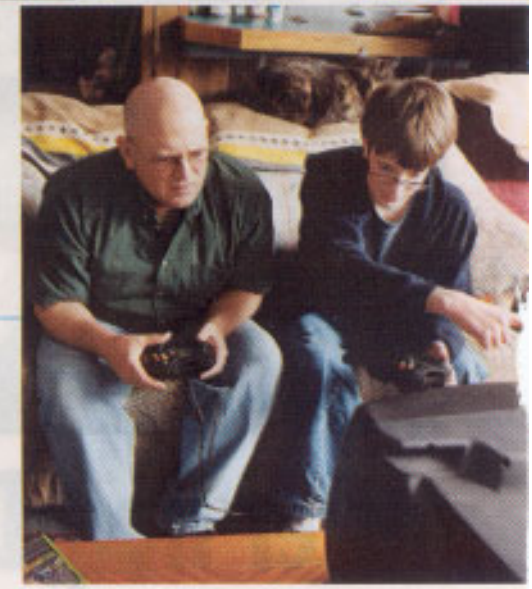
—Caused by a jolt to the head that disrupts the functioning of the brain

—**Symptoms include:** chronic headache, confusion, fatigue, memory loss, mood swings, increased sensitivity to light and sound

—**Prognosis:** With cognitive and physical therapy, most patients can regain brain function lost due to trauma



"I hate to see him struggle," says Shana Giess of Alec (left, with her, son Spencer and daughter Simone). "I want to help, but I don't want him to feel helpless." Paper reminders (above right) posted around his Oregon home help him get through the day. Still, the brain injuries he sustained while serving in Iraq make it "terrible to try to hold a marriage together," says Giess (with Spencer).



52nd Army Engineer Battalion, he was traveling in a 5-ton truck with nine other soldiers when the vehicle hit an oil slick and flipped over. The driver of the transport was killed in the accident, but—protected by high-tech body armor and helmet—Giess and others aboard survived. After being treated for a broken collarbone and a broken vertebra in his back, he was discharged with a clean bill of health. Once back home, however, Giess sometimes slept all day, suffered mood swings and kept forgetting. Three months later, doctors explained why: In the accident, Giess suffered traumatic brain injury, or TBI, a jolt to the head that seriously disrupts brain function—sometimes permanently. "That's when I was most scared," he says of the diagnosis. "That was devastating to me."

He isn't alone. Since the beginning of the Iraq war so many soldiers have been diagnosed with TBI—more than 400 in one hospital alone from operations in Iraq and Afghanistan—that many military doctors describe it as the signature injury of the conflict. Ironically, the rising number of cases appears linked to technology designed to save soldiers' lives. New Kevlar helmets and body armor have spared thousands from devastating wounds that would have killed them in earlier wars. But absorbing the impact of powerful explosions in combat—or accidents like Giess's—can jar the brain so badly that soldiers experience damage that may go undetected for weeks or months. "They're surviving where they wouldn't have survived before," says Dr. Tim Silver, chief of physical medicine at Virginia's Hunter Holmes McGuire VA Medical Center. "But they're walking away with the lasting effects of the head injury."

Those symptoms include memory loss, depression, inability to concentrate and increased anxiety. "Society needs to know that sufferers can look normal and have problems," says Dr. Deborah Warden, who runs the brain trauma unit at Walter Reed Army Medical Center in Washington, D.C., where 60 percent of patients wounded in Iraq have been diagnosed with TBI. To help sufferers, the military is stepping up efforts to detect such injuries and provide physical and cognitive therapies that can help them heal. Patients write in journals, or "memory books," to help spur recall, participate in rehab exercises to aid concentration and take classes to relearn basic life skills. If caught early, says Warden, "there is a very good prognosis [patients] will improve." But recovery can take years.

That will likely be the case with Erik Castillo, 21, from Rio Rico, Ariz., wounded in a mortar attack in Iraq last July. Shrapnel rained down on Castillo's head, but his helmet saved his life. When he awoke a week later at Walter Reed, he was partially paralyzed and had an injured right eye, a shattered cheekbone and TBI. His sight and mobility have been restored; his brain has not. Distracted and depressed, Castillo is hardly the outgoing young man he once was. "The serenity of our life has been disrupted in every way," says his mother, Maria, 39.

That pain is becoming all too common in military families. Before shipping out to Iraq, Ken Dettbarn of Elkader, Iowa, was known for his outgoing personality and quick wit. But after a

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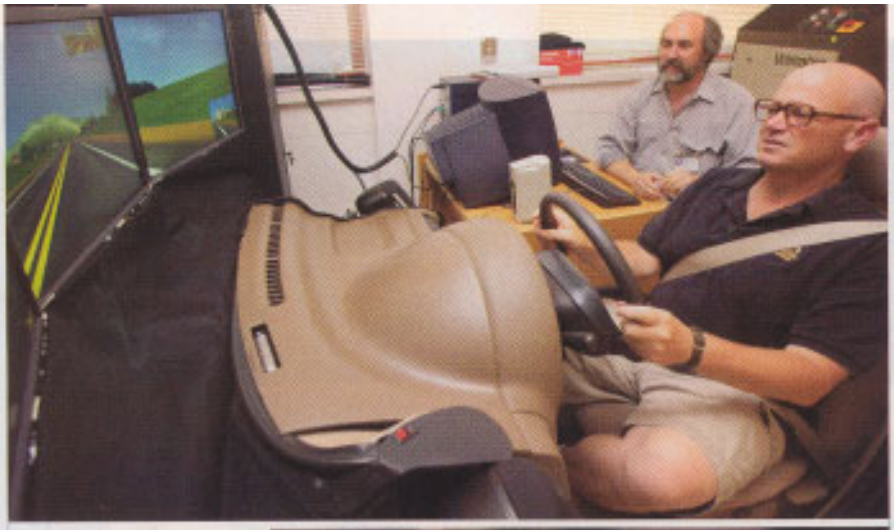

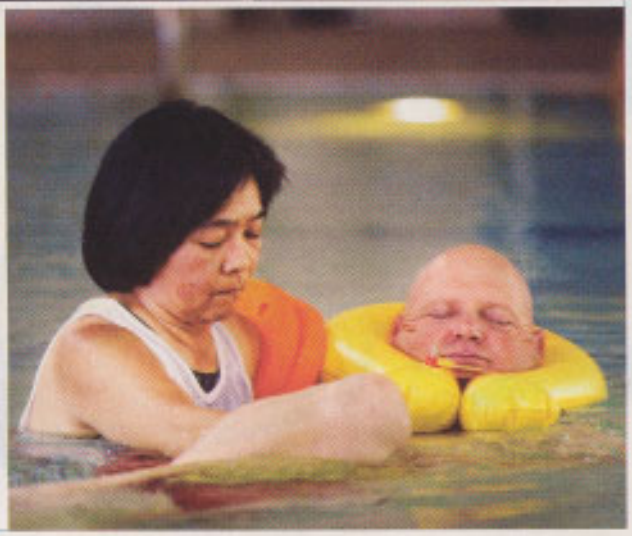

On a visit to the veterans' hospital in Palo Alto, Calif., Giess is tested to see how TBI affects his ability to drive (above) and undergoes rehab exercises in a swimming pool with physical therapist Renee Kawahara that are designed to help him quiet his mind and refocus the concentration shattered by his brain injuries.

February Humvee accident that violently shook his brain, his mental capacities have dulled. "I'm slower," says Dettbarn, 39, who is now recovering at the Minneapolis VA Medical Center. "There are words I have trouble remembering." Still, his wife, Linda, is thankful that a helmet and armor limited other injuries to fractured ribs and vertebrae and two punctured lungs. "I'm certain it saved his life," she says.

Doctors who have examined Alec Giess believe a Kevlar helmet saved him too. But he's been left with a life plagued by memory lapses and sensory dysfunction. Not long after he returned from Iraq to Fort Carson, Colo., Giess bought a car; three days later he had forgotten the purchase. When a friend reminded him, "I went, 'Oh, yeah. What color was it?'" he recalls. He tires easily and in public places experiences sensory overload. In casual conversation, Giess struggles to hold on to details he once easily recalled, such as the strokes his daughter Simone, 15, swims for her high school team. In an effort to heal his brain, he underwent therapy at a Palo Alto, Calif., VA hospital and later a Portland rehab center. To get by each day, he writes himself reminders in his date book. "I don't trust myself—I don't trust my memory," Giess says. "Every day is a fight."

That struggle is shared by Giess's wife, Shana, 39, who now must prod her husband to stick to a routine of simple household chores and keep a reasonable bedtime. "It's like raising another kid," says Shana, who is also raising Simone and son Spencer, 14. At times, she says, Alec blurts out inappropriate comments. "We might think something like, 'That's an ugly shirt,' but we wouldn't say it. Alec would," says Shana. "It's almost like being with somebody who is drunk."

And it's nothing like the easygoing Alec who went off to war. Raised mostly in Seattle, he dropped out of high school to work in construction, then joined the National Guard in 1980. "I always had pride in the country," he says. Starting his own building company in 1984 and marrying Shana two years later, he was on active-duty standby in 1991's Gulf War but never served. Then, in February 2003, he was called up for Operation Iraqi Freedom. "I really liked what we did," he says. "Just being part of a group."

His accident came just a few days after his unit received new helmets and body armor. "I thought, 'We're going to be okay,'" he recalls, "and then *boom*, it was lights out." Giess was treated in Iraq and then airlifted to a military hospital in Germany, where an MRI didn't detect a head injury. But when he was shipped stateside, Shana noticed that he was excessively drowsy and suddenly moody. Army doctors initially believed Giess's personality shift was due to posttraumatic stress disorder, which shares some symptoms with TBI. But when his memory problems persisted, a battery of neurological tests uncovered the real culprit. Says Shana: "It was like, 'Finally, this all makes sense.'"

That hasn't made it any easier for his family to cope. Mentally unable to return to his business, Giess recently began doing manual labor in an Army National Guard warehouse, and money is tight. Some days, Shana says, "Alec says he would give us a limb to have his head back." Still, he hasn't given up. "I've still got that old me in me," he says. "I just have to keep going."

By Thomas Fields-Meyer. Vickie Bane in Cannon Beach and **Jane Podesta, Robert Schlesinger** and **Jessica Voelker** in Washington, D.C.